

DP-305833

IN THE CLAIMS

1. (Previously Presented) A method for manufacturing a planar temperature sensor having an inputted resistance value, the method comprising:

disposing a thick amount of a material having a thermal coefficient of resistance of greater than about 800 parts per million and a natural resistance of above about 5 micro-ohm-centimeters on a substrate;

measuring a resistance value of said material; and setting a laser trimming device to ablate material consistent with achieving the inputted resistance value.

2. (Original) A method for manufacturing a planar temperature sensor as claimed in claim 1 wherein said disposing comprises depositing a thick film of material on said substrate in a thick film deposition process.

3. (Original) A method for manufacturing a planar temperature sensor as claimed in claim 1 wherein said measuring is to within $\pm 0.2\%$ total resistance value.

4. (Original) A method for manufacturing a planar temperature sensor as claimed in claim 1 wherein said setting includes a first setting to achieve a first inputted resistance value and a second setting to achieve a second inputted resistance value.

5. (Original) A method for manufacturing a planar temperature sensor as claimed in claim 4 wherein said method further comprises firing said planar temperature sensor between said first setting and said second setting.

6. (Original) A method for manufacturing a planar temperature sensor as claimed in claim 5 wherein said firing is maintained for a period of time.

DP-305833

7. (Original) A method for manufacturing a planar temperature sensor as claimed in claim 5 wherein said firing is maintained until an inflection in a resistance versus time curve is reached.

8. (Original) A method for manufacturing a planar temperature sensor as claimed in claim 1 wherein said disposing is depositing one of platinum, rhodium, titanium, palladium and mixtures and alloys comprising at least one of the foregoing.

9. (Original) A method for manufacturing a planar temperature sensor as claimed in claim 1 wherein said substrate is a ceramic material.

10. (Original) A method for manufacturing a planar temperature sensor as claimed in claim 9 wherein said ceramic material is one of alumina, zirconium and composition including at least one of the foregoing materials.

11. (Original) A method for manufacturing a planar temperature sensor as claimed in claim 5 wherein said firing is at a temperature from about 1000°C to about 1600°C.

12. (Previously Presented) A method for manufacturing a planar sensor as claimed in Claim 1, further comprising ablating an amount of material disposed on the substrate with a laser trimming device, the amount of material ablated being sufficient to meet the inputted resistance value.

13. (Canceled)

DP-305833

14. (Previously Presented) A method for manufacturing a planar sensor as claimed in Claim 1, further comprising ablating an amount of material disposed on the substrate with a laser trimming device, the amount of material ablated being sufficient to meet the inputted resistance value, further comprising:

determining a value for a resistance overshoot as a function of the thermal coefficient of resistance of the material disposed on the substrate; and

trimming the material by an amount determined in relation to the resistance overshoot value.

15. (Previously Presented) A method for manufacturing a planar sensor as claimed in Claim 1, further comprising ablating an amount of material disposed on the substrate with a laser trimming device, the amount of material ablated being sufficient to meet the inputted resistance value, further comprising:

ablating the material disposed on the substrate to cut a pattern having an elongated configuration.

16. (Currently Amended) A method for manufacturing a planar sensor as claimed in Claim 15, wherein the elongated configuration is chosen from a serpentine pattern and a spiral platter pattern.